

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| In re Application of: |) | |
| Ian Craig BARKHOUSE |) | |
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| Serial No.: 10/710,981 |) | Confirmation No. 4980 |
| |) | |
| Filed: August 16, 2004 |) | Group Art Unit: 3673 |
| |) | |
| For: COLLAPSIBLE MATTRESS BORDER |) | Examiner: Jonathan Liu |
| CONSTRUCTION AND METHOD |) | |
| |) | |

AMENDMENT IN RESPONSE TO APRIL, 21 2006 OFFICE ACTION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the April, 21 2006 Office Action, please reconsider the above-identified application in view of the following response in which:

Listing of Claims begins on page 2 of this paper.

Remarks/Arguments begin on page 6 of this paper.

LISTING OF CLAIMS

1. (currently amended) A border assembly for a mattress or bedding material, said assembly comprising:

- a first side rail,
- a first end rail pivotably attached to said first side rail,
- a second side rail pivotably attached to said first end rail, and
- a second end rail pivotably attached to said second side rail and said first side rail,

wherein said side rails and said end rails form a collapsible border assembly in which when collapsed, the first end rail and the first side rail are generally aligned end to end in a first row and the second side rail and second end rail are generally aligned end to end in a second row, and when opened the first and second side and end rails define a center opening to accommodate a core section of the mattress or bedding material.

2. (original) The border assembly according to claim 1, wherein said first and second side rails and said first and second end rails comprise polyurethane foam.

3. (original) The border assembly according to claim 2, wherein pivotable attachment between the first end rail and first side rail is by a hinge.

4. (original) The border assembly according to claim 2, wherein pivotable attachment between the second side rail and the first end rail is by a hinge.

5. (original) The border assembly according to claim 3, wherein said hinge is formed from a material selected from the group consisting of adhesive tape, plastic, and polyurethane foam.

6. (original) The border assembly according to claim 2, wherein pivotable attachment between the first end rail and first side rail is by a hinge formed by retaining a portion of foam material between said first end rail and said first side rail when cutting a mitered end wall in each of said rails.

7. (original) A border assembly for a mattress or other bedding material, said assembly comprising:

- a first foam side rail having a top wall, a bottom wall, an outer side wall, an inner side wall, a mitered end wall, and a square end wall;
- a first foam end rail having a top wall, a bottom wall, an outer side wall, an inner side wall, a square end wall, and a mitered end wall, wherein said mitered end wall of said

first foam end rail is pivotably attached to said mitered end wall of said first foam side rail, thereby forming a mitered corner joint;

a second foam side rail having a top wall, a bottom wall, an outer side wall, an inner side wall, a mitered end wall, and a square end wall, wherein said square end wall is pivotably attached to a portion of said inner side wall of said first end rail, thereby forming a joint; and

a second foam end rail having a top wall, a bottom wall, an outer side wall, an inner side wall, a square end wall, and a mitered end wall, wherein said mitered end wall of said second foam end rail is pivotably attached to said mitered end wall of said second foam side rail, thereby forming a mitered joint, and said square end wall of said second side rail is pivotably attached to a portion of said inner side wall of said second end rail, thereby forming a joint.

8. (original) The border assembly according to claim 7, wherein said first and second foam side rails and said first and second foam end rails comprise polyurethane foam

9. (original) The border assembly according to claim 7, wherein pivotable attachment between the first end rail and first side rail is by a hinge.

10. (original) The border assembly according to claim 7, wherein pivotable attachment between the second side rail and the first end rail is by a hinge.

11. (original) The border assembly according to claim 9, wherein said hinge is formed from a material selected from the group consisting of tape, plastic, and polyurethane foam.

12. (withdrawn) A method of preparing a collapsible border assembly for pre-assembly into a mattress construction, comprising:

forming a mitered end wall on a first side rail by cutting said end wall at an angle of between about 30 to 60 degrees;

forming a mitered end wall on a first end rail by cutting said end wall at an angle of about 30 to 60 degrees;

forming a mitered end wall on a second side rail by cutting said end wall at an angle of about 30 to 60 degrees;

forming a mitered end wall on a second end rail by cutting said end wall at an angle of

about 30 to 60 degrees;

pivotably attaching said first side rail to said first end rail at said respective mitered end walls, thereby forming a mitered corner joint;

pivotably attaching said mitered end wall of said second end rail to said mitered end wall of said second side rail, thereby forming a mitered corner joint;

pivotably attaching an end wall of the second side rail to a portion of an inner side wall of said first end rail, thereby forming a joint; and

pivotably attaching an end wall of the first side rail to a portion of an inner side wall of said second end rail, thereby forming a joint,

wherein the first end rail, first side rail, second end rail and second side rail together form the collapsible border assembly.

13. (withdrawn) The method of claim 12, further comprising the step of:

collapsing said collapsible border assembly by straightening the mitered corner joints and bending the joints to place said side rails substantially in contact with said end rails.

14. (withdrawn) The method of claim 12, wherein the mitered end walls are each formed at an angle of about 45 degrees.

15. (currently amended) A mattress assembly kit having component parts capable of being assembled at the mattress manufacturer's site, the kit comprising the combination of:

a mattress core section;

a collapsible border assembly having first and second side rails pivotably attached to first and second end rails, wherein, when opened, said first and second side and end rails

define a center opening to accommodate the mattress core section, and when collapsed, the first end rail and the first side rail are generally aligned end to end in a first row and

the second side rail and second end rail are generally aligned end to end in a second row;

a top sheet for attaching to top walls of said first and second side rails and said first and second end rails; and

a bottom sheet for attaching to bottom walls of said first and second side rails and said first and second end rails.

16. (original) A mattress comprising the border assembly of claim 1.

17. (original) A mattress comprising the mattress assembly kit of claim 15.

18. (currently amended) A method of making a mattress that incorporates a mattress border assembly, comprising:

expanding a collapsible mattress border assembly having first side rails and second side rails pivotably attached to first end rails and second end rails from a collapsed position in which the first end rail and the first side rail are generally aligned end to end in a first row and the second side rail and the second end rail are generally aligned end to end in a second row [,] to an open position wherein said side rails and end rails define a center opening;

inserting a mattress core into said center opening, whereby said collapsible mattress border assembly forms a perimeter frame around said mattress core;

attaching a top sheet onto top walls of said side rails and end rails;

attaching a bottom sheet onto bottom walls of said side rails and end rails;

encasing said mattress core, said collapsible mattress border assembly, and said top and bottom sheets with a fabric or casing.

19. (new) A border assembly for a mattress or bedding material, said assembly comprising:

a first side rail,

a first end rail pivotably attached to said first side rail,

a second side rail pivotably attached to said first end rail, and

a second end rail pivotably attached to said second side rail and said first side rail;

wherein said side rails and said end rails form a collapsible border assembly; and

wherein pivotable attachment between the first end rail and first side rail is by a hinge formed by retaining a portion of foam material between said first end rail and said first side rail when cutting a mitered end wall in each of said rails.

REMARKS

Applicant requests reconsideration of the application as amended.

Status of the Claims

Claims 1-6 and 15 to 19 are pending in the present application. Claims 12 to 14 have been withdrawn in response to a restriction requirement. Claims 7 to 11 are allowed. Claims 1, 15 and 18 have been amended. Support for the amendment to these claims is found *inter alia* in FIG. 1 and paragraph [0016]. Claim 19 is newly presented. Claim 19 is claim 6 re-written in independent form.

Applicant thanks the Examiner for indicating that the subject matter of pending claim 6 is allowable and that claims 7 to 11 are allowed. Claim 19 includes the limitations of claim 1 and claim 6 re-written in independent form, and thus should be allowed.

Rejection Under 35 U.S.C. § 102(b)

Claims 1 and 16 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent 4,788,727 (Liu). Liu discloses a collapsible bed base using hinges. In its collapsed form, the outer sides of the two horizontal split frame members (22, 24) are opposite each other and are generally aligned to the other two horizontal split frame members (28, 30) as illustrated in part by Fig. 7. The split frame members are parallel to side frame members (20, 26). Liu's bed base is intended to support a separate mattress, and is not intended as a component part of a mattress. Liu's bed base thus is not a mattress border assembly.

In contrast, Applicant's collapsible border assembly is intended to be incorporated into a mattress construction. In addition, different from Liu, Applicant developed a collapsible border assembly in which when collapsed, the first end rail and the first side rail are generally aligned end to end in a first row and the second side rail and second end rail are generally aligned end to end in a second row. Claim 1 has been amended to make this structure more clear. In the collapsed position, Applicant's rails are more readily packaged for transport. This feature is not shown in Liu. Moreover, while both Liu's

bed base and Applicant's border assembly are collapsible, Applicant's structure requires only three hinges while Liu requires at least six hinges and is therefore more cumbersome and more costly to manufacture and unfold.

According to the Examiner, claim 16 is rejected because Liu discloses support of any type of mattress. First, claim 16 depends from claim 1 and is patentable for the same reasons claim 1 is patentable. Second, Applicant notes that to show anticipation under 35 U.S.C. §102(b), "each and every element as set forth in the claim [must be] found, either expressly or inherently described, in a single prior art reference." (MPEP § 2131, citation omitted). In this case, Applicant respectfully submits that Examiner has not shown anticipation of claim 16 because a collapsible bed base is distinct from a mattress. Liu discloses the use of a collapsible bed base made from wood planking (col. 3, lines 36-37; col.5 line 32) for use as lateral support with a separate mattress or hybrid waterbed mattress (col. 2, lines 7-8; col. 3, lines 64-65). Applicant's claim 16 claims a mattress comprising a border assembly. Liu does not disclose a mattress having a border assembly as required by this claim. Therefore, for this additional reason, Liu's disclosure does not anticipate a mattress having a collapsible border assembly as required in claim 16.

Rejections Under 35 U.S.C. § 103(a)

Claims 2 to 5, 15 and 17-18 were rejected under 35 U.S.C. §103(a) as allegedly obvious over the purported combination of U.S. Patent 4,788,727 (Liu) with U.S. Patent Publication 2003/0000021 (O'Connell). According to the Examiner, Liu discloses the invention of claim 1 and O'Connell teaches a polyurethane foam border assembly. The Examiner contends that it would have been obvious to modify Liu and use polyurethane foam rails disclosed by O'Connell being motivated by the resulting inexpensive support system obtained. The Examiner contends further that it would have been obvious "to modify the rails of O'Connell to be pivotably attached as disclosed by Liu." Applicant respectfully disagrees and traverses the rejections as to all pending claims.

As a preliminary matter, Applicant notes that in order to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), the Examiner bears the burden of establishing three elements: "[f]irst there must be some suggestion or motivation, either

in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference . . . must teach or suggest all the claim limitations.” (MPEP § 2142). In the present case, Applicant submits that the Examiner has not met this burden for at least the reason that no motivation has been shown for modifying the teachings of Liu or O’Connell to obtain Applicant’s claimed invention. Moreover, persons of ordinary skill in the art would not have been motivated to attempt to combine Liu and O’Connell in the manner the Examiner has proposed. The Examiner makes such modifications only with hindsight knowledge of Applicant’s claimed invention.

As stated above, Liu discloses a rigid collapsible foundation onto which a separate bedding mattress may be positioned. Liu has nothing to do with border systems for mattresses, or mattress assembly kits, or simplifying mattress fabrication. The foundation in Liu is used in place of a standard box spring. Liu’s collapsible bed foundation has six, preferably wooden, rigid members (20, 22, 24, 26, 28, 30) and four corner bumper members (46), and removable flooring panels (40, 42, 44) flush with the top of the rigid frame or recessed from the top of the rigid frame (Fig. 2; col. 5, lines 6-9). The removable rigid flooring panels do not attach to the collapsible frame but are placed on top of the support joists and are lying adjacent to the inner surface of the rigid frame members (Fig. 2).

As set forth in claim 15, Applicant claims a mattress assembly kit having component parts capable of being assembled at the mattress manufacturer’s site. The kit comprises the combination of a mattress core section, a collapsible border assembly and a top sheet and a bottom sheet for attaching to the top and bottom walls of the rails respectively. Different from Liu where the removable flooring panels lay adjacent to the frame, Applicant’s top and bottom sheets adhere to the top and bottom of the border assembly, encasing a mattress core. The flooring panels in Liu are not equivalent to the function and placement of a top sheet recited in claims 15 and 18. Thus, Liu does not disclose a top sheet within the meaning of the current invention.

In addition, claims 15 and 18 have been amended to make clear that the border assembly when collapsed has the end rails and side rails aligned generally end to end to

form rows. Liu's frame does not collapse in this manner, and does not teach or suggest this feature.

O'Connell does not fill the gaps in the disclosure of Liu. O'Connell discloses a mattress assembly using a top (70) and a bottom (72) foam sheet that are adhered to the top and bottom walls of the rails of a mattress border construction. However, O'Connell's mattress border construction has separate foam rails adhered to one another with double-sided adhesive tape. O'Connell does not teach or suggest that the rails may be pivotably attached to one another. The double-sided tape is not positioned to form a hinge and does not provide pivotable attachment between side and end rails. O'Connell wants the entire strip of adhesive tape to "fixedly adhere" or "fixedly attach" to the side wall of an adjacent foam rail (e.g., Paras. [0007] and [0009]). Lacking pivotable connection, O'Connell does not show a collapsed position and an open position for the rails.

The Examiner may not rely upon hindsight reconstruction. *In re Fritch*, 23 USPQ.2d 1780, 1784 (Fed. Cir. 1992) ("It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious."). The mere fact that the prior art may be modified in some manner as suggested by an Examiner does not make the modification obvious unless the prior art suggested the desirability of such modification. 23 USPQ.2d at 1783-84. Here, a person having ordinary skill in the art would not be motivated to modify the teachings of Liu to increase efficiency and function in a foam mattress border assembly. Liu's collapsible rigid member bed base does not provide motivation to use resilient foam border rails as components in a mattress per se. Likewise, a person having ordinary skill in the art would not be motivated to modify the teachings of O'Connell to allow for pivotable movement between the foam side rails of a border assembly based on the collapsible bed base frame of rigid frame members shown in Liu. The Examiner improperly picks out selected teaching from Liu (collapsible frame, hinges) and O'Connell (top and bottom sheet, foam rails) where there is no motivation in O'Connell or Liu to do so.

For at least these reasons, the Examiner has failed to establish a *prima facie* case of obviousness, and all pending claims should be allowed.

Conclusion

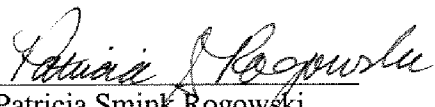
In view of the foregoing, the rejections should be withdrawn and all pending claims should be allowed.

If prosecution may be further advanced, Examiner is invited to telephone the undersigned to discuss this application.

No fee is believed due for this response. If there are any fees due in connection with the filing of this response, such as a fee for an extension of time, such extension is requested and the fee should be charged to Deposit Account No. 03-2775.

Dated: June 22, 2006

Respectfully submitted,



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